

ADDENDUM SHEET FOR UD/UEUED-1 SERIES & PR-1 FOR PLECTRON WITH GROUP CALL A OR B & FOR MOTOROLA WITH GROUP CALL ON B TONE

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The normal UD/UEUED-1 SERIES & PR-1 modules do not support Group Call on a long, typically 5-7 second single tone. These products support Group Call through the use of an additional Group Call register, which is simply another 2-tone sequence. This addendum still supports the additional Group Call register but adds the long tone on either the first (A) or second (B) digit for Plectron, and the second tone for Motorola.

This addendum removes all 5-tone formats from the UD/UE/UED-1 & PR-1 product lines and adds Plectron with mode 47 in the chart below, mode 48 adds Plectron with Group Call capability on the first (A) tone, mode 49 provides Plectron Group Call capability on the second (B) tone.

This addition also adds Group Call to all of the Motorola formats 20-41. The Motorola format provides Group Call on the second (B) tone.

The Group Call tone must be greater than 3.6 seconds for both the Plectron and Motorola formats.

TABLE 5: ANI, DIAL, TRANSPOND & DECODE MODES							
#	MODE	TIME 1	TIME 2	#	MODE	TIME 1	TIME 2
00	NONE	UNUSED	UNUSED	30	MOTOROLA K	FIRST TONE	SECOND TONE
01	DTMF	TONE ON	TONE OFF	31	MOTOROLA L	FIRST TONE	SECOND TONE
02	2805	DIAL RATE	TAIL TONE	32	MOTOROLA M	FIRST TONE	SECOND TONE
03	1500	DIAL RATE	TAIL TONE	33	MOTOROLA N	FIRST TONE	SECOND TONE
04	NONE	UNUSED	UNUSED	34	MOTOROLA P	FIRST TONE	SECOND TONE
05	BURST	FREQ	TIME	35	MOTOROLA Q	FIRST TONE	SECOND TONE
20	MOT GENERAL	FIRST TONE	SECOND TONE	36	MOTOROLA R	FIRST TONE	SECOND TONE
21	MOTOROLA A†	FIRST TONE	SECOND TONE	37	MOTOROLA S	FIRST TONE	SECOND TONE
22	MOTOROLA B	FIRST TONE	SECOND TONE	38	MOTOROLA T	FIRST TONE	SECOND TONE
23	MOTOROLA C	FIRST TONE	SECOND TONE	39	MOTOROLA U	FIRST TONE	SECOND TONE
24	MOTOROLA D	FIRST TONE	SECOND TONE	40	MOTOROLA V	FIRST TONE	SECOND TONE
25	MOTOROLA E	FIRST TONE	SECOND TONE	41	MOTOROLA W	FIRST TONE	SECOND TONE
26	MOTOROLA F	FIRST TONE	SECOND TONE	45	GE	FIRST TONE	SECOND TONE
27	MOTOROLA G	FIRST TONE	SECOND TONE	46	REACH	FIRST TONE	SECOND TONE
28	MOTOROLA H	FIRST TONE	SECOND TONE	47	PLECTRON	FIRST TONE	SECOND TONE
29	MOTOROLA J	FIRST TONE	SECOND TONE	48	PLECTRON - A	FIRST TONE	SECOND TONE
				49	PLECTRON – B	FIRST TONE	SECOND TONE

Plectron Tones											
		10	416.9	20	643	30	992	40	1530	50	2361
01	282.2	11	435.3	21	672	31	1036	41	1598	51	2465
02	294.7	12	454.6	22	701	32	1082	42	1669	52	2574
03	307.8	13	474.8	23	732	33	1130	43	1743	53	2688
04	321.4	14	495.8	24	765	34	1180	44	1820	54	2808
05	335.6	15	517.7	25	799	35	1232	45	1901	55	2932
06	350.5	16	540.7	26	834	36	1287	46	1985	56	3062
07	366.0	17	564.6	27	871	37	1344	47	2073	57	3197
08	382.2	18	589.7	28	910	38	1403	48	2165	58	3339
09	399.2	19	615.8	29	950	39	1465	49	2260	59	3487

Plectron unlike Motorola, GE, and Reach has never created a written code plan. For this reason, you cannot simply enter a 3-digit cap code because they arbitrarily create a signaling sequence out of thin air at the time of the sale.

In order to encode the Plectron format on a UD/UEUED-1 SERIES product or PR-1 it is necessary to enter the 2 digits for the first tone and 2 digits for the second tone from the Plectron Tone chart above. To perform Group Call on the A tone enter the first pair of numbers for the first tone twice and hit * to transmit. To perform Group Call on the B tone enter the second pair of numbers for the second tone twice and hit * to transmit.

In Registers 01 – 09 instead of entering the usual 3 digit cap code enter 4 digits where the first 2 digits equals the first desired tone from the Plectron chart and the second 2 digits equals the second desired tone from the Plectron chart above.

When using the memory dial for Plectron enter the 2 digits for the first tone and 2 digits for the second tone followed by *NN (NN = memory location 01-09).

The top four tone frequencies (46, 47, 48, 49) on the Plectron chart are above the normal 3 kHz pass band of today's land mobile radios. The filter response on the UD/UE/UED-1 SERIES & PR-1 rolls off at 3 kHz also. If you are using the last 4 tones you may want to modify the pass band of the radio and the UD/UE/UED-1 SERIES or PR-1's filter circuit.

Motorola Group Call works normally by dialing sequences like 155, 233, 477, 599, etc. Only cap codes with a 1, 2, 4, or 5 are capable of Group Call.

It is possible to use Motorola Quick Call 2 and Plectron in the same encoder. Add a toggle switch to the unit and connect it to the Emergency/Auxiliary line to select Motorola or Plectron. Then program register R11 for the secondary dial format and timing.

ONE, TWO & FOUR TONE TIMING SEQUENCE				
FORMAT	CALL SEQUENCE	1st TONE	GAP	2nd TONE
BURST TONE	OPEN SQUELCH	100 - 500 ms		
MOTOROLA 2 + 2 QUICK CALL 1 SERIES Y	INDIVIDUAL CALL	1 sec	200 ms	1 sec
	GROUP CALL	4 sec of tone 2 & 3		
MOTOROLA 1 + 1 QUICK CALL 2	INDIVIDUAL CALL TONE & VOICE	1 sec	0	3 sec
	GROUP CALL	0	0	8 sec
	TONE ONLY	.4 sec	0	.8 sec
	TONE ONLY BATTERY SAVE	2.7 sec	0	.8 sec
REACH TWO TONE	REACH SLOW	2 sec	25 ms	.7 sec
	REACH FAST	150 ms	25 ms	150 ms
	REACH GROUP CALL TWO TONE	5 sec	0	0
REACH SINGLE TONE	REACH SINGLE TONE	1.5 sec	0	0
	REACH SINGLE TONE BATTERY SAVE	3.5 sec	0	0
PLECTRON	SINGLE TONE	3 sec		
	PLECTRON FAST DUOTONE	.75 sec	0	.25 sec
	PLECTRON SLOW DUOTONE	3 sec	0	.25 sec
AVCALL 2 + 2	UNIT CALL	1.25 sec	.2 sec	1 sec
GENERAL ELECTRIC	GENERAL ELECTRIC TYPE 98	1 sec	0	1.5 sec
	FOUR TONE GE TRUNK	40 ms each, no gap 1st tone is collect tone and is 90 ms times number of channels		
NEC	GROUP CALL			
A	6 sec	1 sec	.25 sec	3 sec
B	6 sec	1 sec	0	3 sec
C	4 sec	1 sec	0	1 sec
D	3 sec	.4 sec	0	.4 sec
L	3 sec	.5 sec	0	.5 sec
M	4 sec	.4 sec	0	.8 sec